Attachment 3

FINAL REGULATORY FLEXIBILITY ANALYSIS
CH. NR 445 REVISED RULE PACKAGE

Section 1. Analysis of Economic Impact

Summary and Conclusions

As part of the evaluation of the regulatory impact of the revisions to NR 445, the Department of Commerce (DOC) interviewed 11 businesses. The interviews focused on how the businesses would respond to the revisions to NR 445 and on the level of effort required to determine if their sources would be in compliance with NR 445.

WMC and Kestrel Management Services conducted an external evaluation of the impacts of NR 445 and its revisions. The WMC/Kestrel evaluation was based on a survey conducted as part of a presentation and workshop held by WMC/Kestrel.

The firms interviewed in the two processes were very different. The DOC interview panel consisted of small businesses. The WMC/Kestrel interview panels tended to be much larger firms with more complex manufacturing processes.

The information in the responses to the DOC survey indicates a much lower median cost to affected companies in the first year after new substances are added to the lists of regulated substances in NR 445.

Highlights of the two surveys:

- The WMC/Kestrel analysis indicated a cost of Search and Inquiry[1] to evaluate potential compliance issues with the new listings in the streamlined revisions to NR 445[2] of between 0 and $37,300 with a median cost of $8,000. This cost represented the incremental cost of complying with NR 445 as a result of the revisions.

- The DOC survey asked respondents to do or to estimate hours of effort required to complete a Search and Inquiry for their facility. The hours of effort ranged from ½ hour to just under 4 hours per facility. The median response was 2 hours. At a cost of $100/hour this would indicate a median cost of $200. The average cost was $197.

- The WMC/Kestrel analysis indicated the administrative cost associated with implementation[3] of the existing NR 445, including BACT/LAER analyses, was between $0 and $160,000 for

[1] Search and Inquiry includes evaluating applicability, reviewing MSDS's, waste stream reviews, literature searches, RCRA data review, emission points identification, estimating rates of emission, etc.

[2] The streamlined rule revisions include the revisions to the list of regulated substances as well as the changes made to reduce the regulatory burden.

[3] Administrative activities associated with implementation include processing approvals (e.g., for BACT and LAER analyses, LAER variances, and permits), reporting, recording, etc.

first year costs with a median cost of $6,400. The WMC/Kestrel cost for a streamlined version of NR 445 ranged from 0 to $35,000 with a median cost of $14,800.

- The DOC survey found only two sources that had done a BACT/LAER analysis and their costs were $8000 and $20,000. Most sources in the DOC survey indicated that they expected to have no administrative implementation costs for new listings.

- The WMC/Kestrel analysis found that median total administrative cost[4] was $66,500 for the revisions to NR 445. The mean (average) cost from Table 2 of the WMC/Kestrel report was $76,350. The average cost for the streamlined rule reported by WMC, in their September 2002 public comments to the Department, was $163,700.

- Using the relative median costs for each activity analyzed by the WMC/Kestrel analysis and using the $200 median cost for search and inquiry from the DOC survey, the DOC respondents would have had a median administrative cost of $2000. Since the average cost for search and inquiry was $197, the average administrative cost would be less than $2000.

While the WMC/Kestrel analysis indicates high costs associated with revisions to NR 445, the DOC information indicates that for typical small manufacturers in Wisconsin the administrative costs associated with adding substances to NR 445 is relatively small. The WMC/Kestrel study reported a median cost of $66,500. For the 1223 firms WMC estimated would be affected by the streamlined rule, the additional cost of the streamlined NR 445 rule revisions would have been $81,000,000. In their September 2002 comments to the Department, WMC cited an average cost of $163,700 per affected facility and a total increased cost of $100,000,000 to the Wisconsin business community. The Department's analysis of the DOC survey indicates that most small manufacturers would need to spend less than $2000 in one-time administrative costs. This indicates a one time additional cost of less that $2,500,000 to the Wisconsin business community for the revisions to NR 445.

Comparing the DOC and WMC/Kestrel Surveys

The information gleaned from the interviews was interpolated using relative median effort information from the WMC/Kestrel Business Impact Study. The primary level of effort to assess compliance in the DOC interviews was the amount of time necessary to identify if a new listing in NR 445 matched a potential air release for a source. The median time required to do this was 2 hours per facility. For many sources, if this finding were negative, the compliance process for the revisions to NR 445 ends.

We assumed a cost of $100 per hour for the search and inquiry time and gave this median effort a cost of $200.

From the WMC/Kestrel study, we know the relative weight of median search and inquiry costs to the median costs of other first year activities. The median responses of the other activities were weighted against the WMC/Kestrel median search and inquiry cost and applied to the cost assigned to the DOC search and inquiry effort.

[4] The total administrative cost includes infrastructure development and maintenance (e.g., monitoring regulatory developments, information technology, public communications), search and inquiry, emission calculations, internal compliance planning (e.g. , selecting a preferred method of compliance) and administrative activities associated with implementation.

The information available indicated median first-year cost for the facilities in the DOC interviews to be less than $2000 per facility. These are non-recurring costs. If a facility is required to make a modification to reduce hazardous air emissions, that facility will have additional costs above $2000 and may have recurring costs for many years. Both this analysis and the WMC/Kestrel analysis do not attempt to quantify costs for specific pollution abatement activities.

This median first year administrative cost is substantially lower than the $66,500 median pre-implementation cost for the streamlined rule in the WMC/Kestrel report. There are several reasons that a large difference in median costs between the two studies is a likely outcome.

First, the WMC/Kestrel report was based on an early concept for a proposed rule. The rule as proposed has been significantly modified based, in part, on information gleaned from the WMC/Kestrel report, the DOC report, and from information gathered during the Technical Advisory Committee meetings.

Second, the WMC/Kestrel report used a sample of firms that chose to participate in an all day session to assess compliance cost issues. These firms are likely to be in the small set of firms with multiple NR 445 responsibilities and emissions. The DOC survey was a sample of small firms. These firms are likely to have minimal NR 445 responsibilities and emissions.

From the air emission inventory reports for the year 2000, we know that fewer than 1800 sources reported air emissions. Of these, only 763 reported Hazardous Air Pollutant (HAP) emissions. Of those sources that reported HAPs, 617 reported 5 or fewer substances and 146 reported more than 5 HAPs. The median number of HAPs reported was 3.

Both surveys show a wide variation in the way firms respond to their environmental health and safety responsibilities. Some firms, both large and small emitters, had well organized and robust computer systems that allowed them to quickly assess any new responsibilities while other sources' data bases required time intensive responses to a change in responsibilities. For small firms, like those in the DOC survey, the amount of effort to assess new potential responsibilities was substantially lower than the effort indicated by firms in the WMC/Kestrel report.

Facilities in the DOC survey that had gone through rigorous NR 445 reviews as part of a new source permit modification indicated that this analysis required the use of consultants and cost between $8,000 and $20,000. The costs included overhead costs prior to any capital costs incurred to reduce emissions or modify production processes. The revised rule has a number of significant "streamlining" provisions to mitigate these costs when the environmental benefits are very small or zero.

The DOC interviews noted a strong perceived value to the streamlining provisions in the rule revisions. Although most sources did not expect to have new pollution reduction responsibilities due to the revisions to NR 445, many of the sources indicated that if they did identify additional regulatory responsibilities, the permit streamlining provisions would be of significant value.

This analysis does not include any costs that may occur when actual changes are required to control emissions or to modify production. These costs are incurred when it is determined that the hazardous air pollutants from a facility are a direct public health concern and the source has no other option to reduce emissions other than installing pollution control equipment.

Background and Assumptions

The cost and level of effort indicated by the DOC interviews is substantially lower than the WMC/Kestrel median responses. This is not an indication that one report is right and one report is wrong. The cost of complying with a rule that covers as many potential sources as NR 445 is going to have substantially more variance than a more typical air pollution rule that covers fewer potential sources that are in the same industry or have units engaged in substantially the same process.

In this analysis, it is assumed that sources are in compliance with DNR rules, other environmental rules including TRI reporting, as well as occupational health and safety rules.

Facilities that use or handle potentially toxic substances are subject to a number of data handling, reporting, and record keeping requirements. This analysis does not attempt to understate the importance or the magnitude of this effort, which can be substantial. However, once this effort has been initiated in response to a state or federal regulation governing potentially toxic substances, the ability to parse out the cost to any one rule or to a modification of a rule becomes difficult. This analysis attempt to look at the new, incremental costs of the revisions to NR 445. Some of those costs are actually cost savings to facilities due to the streamlining provisions in the revised rule.

An analysis to assess the full cost accounting associated with an activity will yield a substantially higher dollar figure. While we agree that for accounting purposes a specific business activity can be appropriated over all fixed business expenses including rent, utility payments, and computer depreciation, this analysis will treat those costs as fixed except where a unique additional marginal effort can be identified. In the WMC/Kestrel analysis, Kestrel applied its Real Cost ™ analysis tools that strive for full accounting of environmental, health and safety costs and benefits.

The businesses interviewed by DOC were able to complete the search and inquiry very quickly compared to the estimates of effort for this task indicated by WMC/Kestrel. Differences in the samples of firms and the presentation of the data may explain a significant portion of these differences.

Emissions data from the full sample of facilities reporting to the Department indicate that the median number of HAPs is 3. Most facilities have relatively few HAPs to report or to add to their reporting. The WMC/Kestrel workshop drew a self-selected sample of sources that appear to have had many more HAPs in their production processes. The facilities in the DOC interviews appeared to have very few HAPs, and some had none.

In addition, the DOC facilities were given a sheet that broke the proposed new listings into likely HAPs by industrial sector. The DOC facilities indicated that this was very useful in reducing the effort required to match potential HAPs to newly listed HAPs. Based on this feedback, the Department will prepare even more detailed lists to assist facilities in their search and inquiry responsibilities.

Role of other Regulations

Wisconsin is proposing to increase the number of substances regulated under NR 445 by 144 to a total of 576. USEPA lists 188 substances as hazardous air pollutants. The difference between the number of Wisconsin and USEPA listings may not imply a high cost of search and inquiry or

compliance. Other federal regulations that cover almost all aspects of commerce will include virtually all potentially hazardous air pollutants.

OSHA's worker-right-to-know provisions require employers to maintain information about any substance that might be hazardous that workers may come into contact with. Material Safety Data Sheets (MSDS) are prepared and accompany products used in manufacturing. Employers must maintain MSDS's for potential OSHA substances.

The Federal Toxic Release Inventory (TRI) covers 660 substances, many more than are regulated as hazardous air pollutants by EPA under section 112 of the Clean Air Act. Again, the existence of the federal reporting requirement creates a database upon which a reasonable search and inquiry may draw.

The lists the Department uses to identify potential additions to NR 445 are the International Agency for Research on Cancer (IARC) and the United States Department of Human and Health Services' National Toxicology Program (NTP) lists for carcinogens and the Threshold Limit Values (TLV) list established by the American Conference of Governmental Industrial Hygienists for non-carcinogens. They have a very good overlap with the information used for potential OSHA substances and with reports on toxic releases already required by federal law.

Record Keeping, Data Bases, and Effort

The Department of Commerce and WMC/Kestrel interviews indicated a wide variation in hazardous substance record keeping and data management systems among the facilities. Some firms indicated they operated detailed, computerized databases to track hazardous substance use and potential for release. Other firms indicated detailed paper filing systems were used that may require more staff time to analyze with respect to additional substance listings as proposed in NR 445. Still other firms indicated that records such as MSDS were kept in a file but were not organized in a manner that made matching to a new listing easy.

Firms choose the level of organization for their management systems based on many factors. If the data are seldom used and the number of potentially hazardous substances used or generated is small, informal databases and filing systems may be the preferred method of record keeping. At least one firm in the WMC/Kestrel interviews indicated that they managed many potentially hazardous substances and had invested in very sophisticated data management software to help manage their hazardous material responsibilities. It should be noted that this firm indicated that its overall cost of compliance with hazardous material rules was high, but the additional cost for the revisions to NR 445 would be low. Their previous compliance investment made a search and inquiry for additional substances relatively quick.

The industry specific likely substances lists prepared by the Department with the support of the University of Wisconsin's Solid and Hazardous Waste Education Center were valuable to facilities. Small manufacturers found it very beneficial to have lists that excluded unlikely hazardous emissions substances.

Section 2. Analysis of Regulatory Flexibility

I. Methods for Reducing the Impact on Small Business

The revised rule includes a number of methods for reducing the regulatory and economic impact on small business. Each regulatory activity within the hazardous air pollutant program was reviewed to determine whether it could be eliminated, simplified, revised to minimize administrative requirements, or improved by providing more flexibility to sources. This led to numerous enhancements. Among these are:

- The incidental emitters concept
- Due diligence/safe harbor/corrective action
- The inclusion of threshold levels for four different stack heights
- Modeling "off-ramp" for all regulated substances and modeling compliance demonstration options for carcinogens
- Limited applicability tables for specific classifications of substances
- Self-certification for compliance

These measures were included in the draft rule that went out to public hearing. Except for some minor revisions in response to comments, these measures have not changed from the draft rule. The draft rule package also included a pilot program to use environmental management systems as a compliance tool. This pilot program has been deleted from the revised rule package in response to comments that indicated the revised rule was sufficiently flexible to make the EMS language unnecessary.

The DOC survey indicated that the cost savings from the streamlining provisions to NR 445 are significant. Among the responses to the streamlining provisions the DOC survey indicated that:

- The early incidental emitter cut-offs were too low to be of value. The Department adjusted the cut-offs based on the feed back.

- Additional stack height provisions were valuable to some firms and some firms indicated this would be one of the first options they looked at.

- Modeling off-ramp provisions were of more value to large firms and those firms with appropriate in-house computer expertise.

- The alternatives to BACT/LAER provisions in the proposed rule were of greatest value to larger firms. These firms indicated that risk modeling would be a very useful tool to demonstrate compliance with NR 445.

- Virtually all firms reported favorable comments on the provisions for compliance certification.

The following describes the streamlining measures and how they reduce the regulatory impact on small business.

Determining Whether a Source Emits a Hazardous Air Contaminant.
The first step in the regulatory process is determining whether a source emits one or more of the substances listed in NR 445. Many see this as imposing the most significant administrative costs

associated with the rule revision. First, it has wide-sweeping applicability since the rule applies to any stationary source that may emit a hazardous air contaminant. Second, the level of effort needed to review the entire list of substances is considerable, if the expectation is that an exhaustive search is required.

The Technical Advisory Group and staff spent considerable time and effort developing measures that would substantially reduce the regulatory impact of the rule at this step. The effect of these measures is to direct resources and attention to the most likely emission sources, to simplify the process, and to eliminate unnecessary work that is likely to result in minimal, if any, environmental benefit.

Incidental Emitters.
The rule revision narrows the scope of the rule by establishing an "incidental emitters" category and limiting the compliance requirements to certain processes and chemicals of special concern. The "incidental emitter" category includes most non-manufacturing sectors and manufacturers that emit less than 3 tons/year of volatile organic compounds and less than 5 tons/year of particulate matter. This has the effect of reducing the potential scope of the regulatory impact from about 260,000 establishments in Wisconsin to about 1,500 establishments. It is estimated that close to 99% of all Wisconsin establishments will fall into the "incidental emitter" category, including over 90% of manufacturing establishments.

Limited Applicability Tables.
Over 100 of the 577 hazardous air contaminants listed in NR 445 will have limited applicability. This automatically eliminates these substances from consideration by all but a few facilities in Wisconsin. The two limited applicability tables will have a regulatory impact only on facilities that manufacture or treat pharmaceuticals or pesticides, insecticides and other similar substances. There are very few of these facilities in Wisconsin.

Due Diligence/Safe Harbor/Corrective Action.
The rule revisions place bounds on the scope of the search and inquiry process. The rule explicitly states that the responsibility of an owner/operator of a source is to exercise due diligence by investigating likely sources of emissions rather than conducting an exhaustive search of all the substances listed in NR 445 and "proving the negative". The rule revisions also include "safe harbor" language that provides sources with the assurance that, if they exercise due diligence and meet compliance requirements for any NR 445 substances identified, they will not be held legally liable if it is later found that they emit an NR 445 substance over threshold levels. They will be required to come into compliance in a timely manner, but they will not be retroactively penalized. This measure focuses time and effort on the most likely potential emission sources and provides an incentive to conduct a meaningful search.

Determining Whether Emissions Exceed Threshold Levels
For sources that emit an NR 445 substance, the second step of the process is to determine whether the emissions exceed emission rates established as thresholds in the pollutant tables. If they don't, then no further action is required. If emissions exceed threshold levels, then further action is required.

The rule revisions include a number of new provisions that make it easier for sources to demonstrate that their emissions do not exceed threshold levels. These measures will greatly reduce the administrative burden for many sources at this step. They will increase the number of sources able to make this demonstration and thus avoid NR 445 related regulatory requirements

and compliance costs. These measures apply across the board to all substances listed in NR 445, not just those that are being added or revised.

Four Stack Threshold Levels.
The change that most significantly reduces the administrative burden at this step of the process is the creation of four threshold levels based on stack heights: under 25 foot; 25 to 40 foot, 40 foot to 75 foot and over 75 foot stacks. Currently, there are two threshold levels for non-carcinogens, under 25 foot stacks and over 25-foot stacks, and a single threshold level for carcinogens.

The stack thresholds are emission rates set for pollutants that are emitted into the air at different heights. They act as regulatory "filters" and are set such that emissions below those levels will not pose a health hazard to the public. If a facility is not physically able to emit at or above these rates, then nothing further is required to demonstrate that emission standards are met. A facility owner may also chose to take operational limitations (such as on the number of hours of operation or throughput rates) to stay below these threshold rates and nothing further would be required. Expanding the number of threshold categories will allow many more facilities to simply look at the table and determine that they are not an affected source.

Complying With Emission Standards
Sources whose emissions exceed threshold levels must demonstrate compliance with the emission standards.

Modeling Demonstration Options.
Demonstrating, through air dispersion modeling, that emissions do not exceed an ambient air standard is the most commonly used method to show compliance for non-carcinogens. The rule revisions include several modeling options that allow sources to demonstrate through source-specific modeling that their emissions, although greater than table thresholds, would not exceed ambient standards or specific risk levels. Modeling options are not currently available for the carcinogens under the existing rule and had the potential to be more complex for non-carcinogens.

These modeling options include:
- The modeling "off-ramp" – an easy to use SCREEN model to demonstrate that emissions do not exceed ambient standards or specific risk levels
- Demonstration that total facility wide emissions of all carcinogens do not exceed the 1 in 100,000 risk level
- Demonstration that total emissions of a particular carcinogen do not exceed a 1 in a million risk level

Alternatives to BACT/LAER
Currently, sources with emissions of non-carcinogens can opt to take operational restrictions (e.g., hours operated each day or process rates) to limit their emissions as an alternative to installing pollution control equipment. However, this option is not available to sources with emissions of carcinogens. These sources must perform a BACT or LAER analysis. This is a rigorous engineering analysis that usually entails hiring a consulting engineer and frequently involves consultations with Air Management staff. Industry and air permit engineers have identified it as a regulatory hurdle that is costly, time-consuming, does not always result in the most cost effective solution and sometimes results in minimal or no environmental benefit.

The rule revisions include several alternatives to BACT/LAER analyses that will reduce the regulatory burden and will be as protective of public health, if not more so. These allow the

owner/operator to make changes within the facility or take operational limits such that the emission concentrations off-site of a particular carcinogen or of all carcinogens do not pose an unacceptable risk to public health. These options reduce the regulatory burden in three ways.

First, they shift the analysis from a prescriptive, narrowly focused and potentially expensive BACT/LAER analysis to an analysis that examines the most cost-effective means of reducing public health risk exposure. Often, the analysis may be simple and straightforward, as is frequently the case with the non-carcinogens, and may not require a detailed engineering analysis.

Second, the compliance solution may be less costly than the BACT/LAER solution would have been, e.g., taking a reasonable limit on hours of operation or throughput versus installing pollution control equipment.

Third, it provides a mechanism for sources with known carcinogens to avoid the LAER variance process by adopting other compliance methods that still are health protective.

Complying with Permit Requirements

Sources with potential emissions over the permitting thresholds will need to comply with NR 406 (construction permits) and NR 407 (operation permits). The rule revisions include two provisions to minimize the administrative burden associated with the permit process.

Compliance Certifications.

The revised rules create a streamlined compliance certification process to minimize the additional administrative burden associated with the permitting process. With the exception of sources needing BACT/LAER approvals, sources will be able to certify compliance by submitting information describing their emissions, how they are meeting the standard and the records they are keeping to demonstrate compliance. The compliance requirements will be incorporated into operation permits during the normal cycle of permit issuance or renewals. This process applies to both existing and new/modified sources and avoids the need to obtain a construction permit or to re-open an operation permit as a result of this rule revision.

For new and modified sources, the compliance certification process has the added advantage of avoiding the potential legal implications of federal enforceability of state-only requirements in a construction permit. Although this situation has yet to occur, the compliance certification provision should provide an additional level of legal comfort to sources.

II. Issues Raised by Small Business during the Rule Hearings

The Department received a number of general comments from companies and trade associations that the number of substances listed in the rule revision resulted in significant administrative costs for industry, despite the streamlining measures.

There were no comments that suggested alternative methods for reducing the impact of the rule revision on small business.

III. Reports Required by the Revised Rule

The revised rule does not add new reporting requirements to any of the applicable regulations. The existing reporting requirements for hazardous air pollutants include the annual emissions inventory reports and the compliance reports associated with an air permit.

Some facilities previously not affected by hazardous air pollutant requirements may be pulled into the regulatory system. These are facilities that emit a previously unregulated substance or a regulated substance whose emission standards and emission inventory reporting thresholds have been lowered.

Sources of incidental emissions will have reporting requirements limited to specific processes and hazardous air pollutants. This will reduce their administrative burden. Most small businesses will be incidental emitters. The annual emission inventory reporting cost is expected to be minimal.

As part of the Department of Commerce interviews, firms were asked if they would need extra records or an extra tracking system as a result of the new NR 445 rule. Some respondents would easily be able to add extra records to their existing system. Adding anything to their existing system would not be a problem for most firms. For those with a good existing system, the additional costs for the extra tracking would be minimal. One respondent, a wood products company with 100 employees, indicated that they would just need a few hours time of one person every year to put together necessary records. Most others indicated that it would only take an additional hour or two of an existing person's time for this task. Only one firm, a small printing company, indicated that this would be a problem because of the complex formulations they use. They estimated that they would need to hire two additional full-time staff for tracking.

Furthermore, most respondents indicated that there would be very minimal extra work necessary for NR 438 reporting once they undergo the initial changes needed for NR 445.

IV. Measures or investments to comply with the rule

Companies whose emissions exceed NR 445 threshold levels have considerable flexibility in determining how to comply with the regulations. Respondents in both the WMC/Kestrel Study and the Department of Commerce studies said that they would first consider alternatives such as reducing or eliminating their use of the substance, raising their stack heights, or taking operating restrictions (e.g., hours operated each day or process rates). The installation of pollution control equipment would be the last resort.

Two firms interviewed by the Department of Commerce had recently done full analyses for NR 445 as part of a New Source permit review. The firms indicated that consultants were used and the Department of Commerce cost range for the two firms was $8000 to $20,000 for the HAP analysis. The revised rule has several proposed revisions to limit these costs where there are few, if any, expected environmental benefits.

V. Additional cost to the state in administering the streamlining provisions

The streamlining provisions will result in cost savings to the state.

VI. Impact on public health, safety and welfare from the streamlining provisions

While many of the streamlining provisions will reduce the administrative burden for a great number of sources, there is the potential that a very small number of sources that should be regulated under NR 445 are inadvertently excluded from regulation. To address possible oversights without imposing unnecessary regulations on the majority of sources, language describing the Department's "backstop" authority is included in the revised rule. This authority

would be used to regulate sources that correctly follow procedures and fall out of the regulatory system, but due to circumstances that are not foreseeable, or are rarely encountered, pose a concern to public health. These sources would be held to the same emissions standards as they would otherwise have been. In order to avoid penalizing these sources inappropriately, the revised rule allows the source the longer of the balance of any existing compliance schedule related to the hazardous air pollutant, 90 days, or a longer timeframe with written approval from the Department. The Department also retains the authority to require compliance with applicable requirements in a shorter period of time if feasible and necessary to protect public health and the environment.